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Application No.:10/728,135

Docket No.:JCLA12578-R

AMENDMENTIn The Claims:

Please amend the claims as follows:

Claim 1. (currently amended) An immersion lithography process, comprising:

forming a photoresist layer on a material layer;

forming a protective layer on the photoresist layer;

performing an immersion exposure step to define at least an exposed portion and an unexposed portion in the photoresist layer;

performing a baking step to alter a polarity of the protective layer on the exposed portion of the photoresist layer to be the same as that of the exposed portion of the photoresist layer by an acid produced in the exposed portion of the photoresist layer in the immersion exposure step; and

performing a development step to remove the ~~soluble~~-exposed portion of the photoresist layer and the ~~soluble~~-protective layer on the exposed portion of the photoresist layer, wherein the exposed portion of the photoresist layer and the protective layer on the exposed portion of the photoresist layer are soluble thereon.

Claim 2. (canceled)

Claim 3. (previously presented) The immersion lithography process of claim 1, wherein the acid produced in the exposed portion of the photoresist layer diffuses to the overlying

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protective layer to alter the polarity of the protective layer on the exposed portion of the photoresist layer in the baking step.

Claim 4. (previously presented) The immersion lithography process of claim 3, wherein the exposed portion of the photoresist layer and the protective layer thereon are turned to be hydrophilic from a hydrophobic state with the immersion exposure step and the baking step.

Claim 5. (canceled)

Claim 6. (original) The immersion lithography process of claim 1, further comprising forming an anti-reflection coating on the material layer before the photoresist layer is formed.

Claim 7. (currently amended) An immersion lithography process, comprising:

- forming a photoresist layer on a material layer;
- forming an acid supplying layer on the photoresist layer;
- forming a protective layer on the acid supplying layer;
- performing an immersion exposure step to define an exposed portion and an unexposed portion in the photoresist layer, while an acid is produced in the exposed portion of the photoresist layer and the acid supplying layer thereon;
- performing a baking step to make the acid diffuse to the protective layer over the exposed portion of the photoresist layer and to a sidewall portion of the unexposed portion of the photoresist layer, so that the protective layer over the exposed portion of the photoresist layer has

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a polarity the same as that of the exposed portion of the photoresist layer; and

performing a development step to pattern the protective layer, the acid supplying layer and the photoresist layer simultaneously by removing the ~~soluble~~ exposed portion of the photoresist layer, the acid supplying layer on the exposed portion of the photoresist layer thereon, the protective layer on the exposed portion of the photoresist layer thereon, and the ~~soluble~~ sidewall portion of the unexposed portion of the photoresist layer, wherein the exposed portion of the photoresist layer, the acid supplying layer on the exposed portion of the photoresist layer, the protective layer on the exposed portion of the photoresist layer, and the sidewall portion of the unexposed portion of the photoresist layer are soluble.

Claim 8. (previously presented) The immersion lithography process of claim 7, wherein the exposed portion of the photoresist layer and the protective layer thereon are turned to be hydrophilic from a hydrophobic state with the immersion exposure step and the baking step.

Claim 9. (canceled)

Claim 10. (original) The immersion lithography process of claim 7, further comprising forming an anti-reflection coating on the material layer before the photoresist layer is formed.

Claims 11-17. (canceled)